

What Is Claimed Is:

Sub
a.

1. Design for constructing an input circuit to receive and process an electrical signal, such as a voltage signal from a voltage source, specifically from a sensor, such as an electrochemical, inductive or optical sensor, where the input circuit has an extremely high input resistance of at least 10^{11} ohms and is located on a printed circuit board (4), where a first area carrying input circuit components (6, 8) of the printed circuit board (4) is separated by a channel-shaped recess from a second area (12) surrounding or contiguous to it (10), characterized in that the channel-shaped recess (10) terminates in the interior of the printed circuit board (4) and is extended in the direction of the printed circuit board (4) thickness as far as a moisture-impervius barrier layer (2) which underlies the first area (2) of the printed circuit board, and in that the channel-shaped recess (10) and the first area (2) are filled and enclosed by a cohesive moisture-impermeable sealing material (24).

2. Design in accordance with claim 1, wherein the moisture-impermeable barrier layer (20) is a metallic layer.

3. Design in accordance with claim 1 and 2, wherein the metallic layer (18) forms a flat layer inside the printed circuit board (4) and is configured uninterruptedly at least under the first area (2).

4. Design in accordance with claims 1, 2 or 3, wherein the printed circuit board (4) is made from an FR4 material, which has at least one moisture-impermeable barrier layer (20) in its interior.

5. Design in accordance with one of the preceding claims, wherein the walls (26) of the printed circuit board (4) bordering the channel-shaped recess (10) are provided with a moisture-impermeable coating (28).

6. Design in accordance with claim 5, wherein the coating (28) is formed from a metal alloy, which for its part is attached in a fluid-tight manner to the barrier layer (20).

7. Design in accordance with one of the preceding claims, wherein the moisture-impermeable sealing material (24) is manufactured on a epoxy base or on a high-density polyethylene base or on a liquid resin base.

8. Circuit card for measurement processing equipment, specifically for a sensor, characterized by a design in accordance with one of the preceding claims.

Cont
Sub
A

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20